

CDMRP Products “In the Pipeline”

Clicking on the link will take you to the project’s Abstract.

Autism Research Program

- Dr. Robert Vogt, Centers for Disease Control and Prevention: [Higher levels of specific antibodies dried blood spots of newborns were associated with a reduced risk of autism spectrum disorders \(ASD\) compared to matched controls.](#)

Breast Cancer Research Program

- Dr. Richard Peto, University of Oxford: [Preliminary analysis of the ATLAS clinical trial, the largest breast cancer treatment trial ever undertaken, indicated that the rate of breast cancer recurrence was lower in women treated with tamoxifen for 10 years versus 5 years; currently in the follow-up phase until 2015.](#)
- Dr. Constantine Ioannides, M.D. Anderson Cancer Center: [E75 HER2-derived Peptide Vaccine \(NeuVax™\) – Characterization of the HER2 receptor on breast cancer cells led to development of E75 HER2-derived Peptide Vaccine \(NeuVax™\), which is now in Phase III clinical trials as a potential breast cancer treatment.](#)
- Dr. Lawrence Lum, Wayne State University: [Discovery that HER2 Bi-Armed Activated T Cells \(HB-ATC\) stimulates an immune response against the HER2 receptor on breast cancer cells led to advancement of this potential breast cancer immunotherapy to a current Phase II clinical trial.](#)
- Dr. George Prendergast, Lankenau Institute for Medical Research: [Preclinical studies that identified and characterized lead inhibitors of IDO, a protein that prevents an immune response against tumors, led to the discovery of an IDO inhibitor called D-1MT, which is now in Phase II clinical trials.](#)
- Dr. Silvia Formenti, New York University School of Medicine: [Clinical trial results showed that breast radiation therapy in the prone, rather than the supine, position greatly reduces unnecessary exposure to the heart and lungs, making prone radiotherapy a potential standard choice in breast radiotherapy.](#)
- Dr. Nimmi Ramanujam, Duke University: [Optical spectroscopy tools have been developed to give a real-time assessment of tumor margins during surgery and to detect biomarkers that provide molecular information about breast biopsy](#) tissue to assist clinicians in making treatment decisions.

Gulf War Illness Research Program

- Dr. James Baraniuk, Georgetown University: [Conducting an investigation with the supplement Carnosine to evaluate its impact on sleep problems, pain, and other symptoms; functional MRI will be used to measure brain activity.](#)
- Dr. Julier Golier, Bronx Veterans Medical Center: [Investigating a new use for Mifepristone to determine if it can improve the health of Gulf War veterans with chronic multi-symptom illness.](#)

- Dr. William Meggs, East Carolina University: [Conducting a crossover clinical trial of Naltrexone and Dextromethorphan to treat neuroinflammation and relieve Gulf War Illness symptoms.](#)
- Dr. Lisa Conboy, Harvard Medical School/New England School of Acupuncture: [Examining the use of acupuncture for its effectiveness in treating multi-symptoms in ill Gulf War Veterans.](#)
- Dr. David Carpenter, State University of New York at Stony Brook: [Evaluating an innovative detoxification treatment program using the Hubbard Regimen as a means of rehabilitative therapy for ill Gulf War Veterans.](#)
- Dr. Ashok Tuteja, VA Medical Center, Salt Lake: [Examining the probiotic Align® \(Bifidobacterium infantis 35624\) as a treatment to improve global health and individual symptoms of irritable bowel syndrome in Gulf War Illness.](#)

Lung Cancer Research Program

- Dr. Peter Hammerman, Dana-Farber Cancer Institute: [Demonstrated discoidin domain receptor 2 \(DDR2\) mutations are present in 4% of squamous cell lung cancers \(SCC\), and DDR2 mutations are associated with sensitivity to Dasatinib, which is now being evaluated in a phase II clinical trial in SCC.](#)
- Dr. Avrum Spira, Boston University Medical Campus: [Leading a multi-institutional, consortium called Detecting Early Lung Cancer Among Military Personnel \(DECAMP\) that is conducting studies evaluating several different molecular tests for the detection of early lung cancer.](#)

Neurofibromatosis Research Program

- The NF Clinical Trials Consortium: [Evaluating the drug Lovastatin as a potential therapeutic to Improve Neurocognitive Outcome in Children between 10 and 16 Years of Age with Neurofibromatosis Type 1 \(NF1\).](#)
- The NF Clinical Trials Consortium: [Evaluating Bevacizumab combined with Trinitectan-based Chemotherapy for Children with Neurofibromatosis Type – 1 and Recurrent/Refractory Malignant Peripheral Nerve Sheath Tumor.](#)
- Dr. Kent Robertson, Indiana University: [Conducting a pilot study of Gleevec in Neurofibromatosis \(NF1\) Patients with Plexiform Neurofibromas.](#)

Ovarian Cancer Research Program

- Dr. Robert Kurman, The Johns Hopkins University: [Conducting a multi-institutional, consortium study focused on identifying and characterizing the early changes of disease associated with ovarian cancer.](#)
- Dr. Patricia Kruk, University of South Florida: [Discovered elevated urinary levels of Bcl-2 in women at risk for ovarian cancer; a device for measuring Bcl-2 in the urine is currently being developed.](#)
- Drs. Santo Nicosia and Jin Cheng, University of South Florida: [Discovered APL-2/triciribine, currently in Phase 1 clinical trials as VQD-002, as a putative inhibitor of Akt-activated cancers \(over 40% of ovarian cancers\).](#)

Peer Reviewed Cancer Research Program

- Dr. Ying-Hsui Su, Drexel University: [Developed an advanced DNA based probe method to detect colorectal cancer in urine samples.](#)

Peer Reviewed Medical Research Program

- Dr. Ronald Triolo, Case Western Reserve University: [Developed a hybrid neuroprosthesis that combines external bracing with electrical stimulation of paralyzed muscles to allow for mobility after paralysis from Spinal Cord Injury.](#)
- Dr. Anthony Guiseppi-Elie, Clemson University: [Created and tested in small animals a biochip that can be temporarily implanted intramuscularly to telemetrically report local lactate and glucose levels to assess the potential for hemorrhagic shock during resuscitation and intensive care from traumatic injury.](#)
- Dr. Stephen Savarino, Naval Medical Research Center: [Showed that Bovine milk immunoglobulin collected from cows immunized with enterotoxigenic *Escherichia coli* \(ETEC\) antigens and administered orally provided protection against ETEC challenge \(traveler's diarrhea\) in humans.](#)
- Dr. Ai Lin, Walter Reed Army Institute of Research: [Optimized imidazolidinedione derivatives and demonstrated in primates that they are orally active with potential curative and prophylactic activity against the parasite that causes malaria.](#)
- Dr. Patrick Kochanek, University of Pittsburgh: [Developed a polynitroxilated, pegylated bovine cell-free hemoglobin \(PNPH\)-based, small volume resuscitation fluid for traumatic brain injury combined with hemorrhagic shock that demonstrates potential as a neuroprotective agent.](#)
- Dr. Blake Hannaford, University of Washington: [Developed a prototype field deployable surgical robot capable of telemanipulation that was successfully tested in a cross-Atlantic setting with simulated surgical tasks.](#)
- Dr. Mark Tommerdahl, University of North Carolina: [Developed a novel, non-invasive prototype system for quantitative assessment of cerebral cortical health, and demonstrated the ability to detect differences in cerebral cortical function between subjects with and without autism.](#)
- Dr. Joseph Rizzo, Massachusetts Eye and Ear Infirmary: [Developed a prototype, small animal model-scale retinal prosthesis with the potential to treat several forms of retinal blindness that are currently untreatable, including blindness caused by battlefield laser injury to the retina and military-related, blast-induced blindness.](#)

Peer Reviewed Orthopaedic Research Program

- Dr. Aaron Dollar, Yale University: [Developed an anthropomorphic body-powered prosthetic hand prototype with eleven degrees of freedom to allow a range of grasping positions, and a finger coupling design that provides the ability to passively adapt to the shape of any object within its grasp.](#)
- Dr. Daniel Nelson, University of Maryland: [Successfully engineered the bacteriophage-derived protein PlyCB to display tri-peptide motifs that bind integrins while also retaining the protein's natural ability to bind hydroxyapatite, a bone component used to coat orthopaedic implants, toward the goal of enhancing osseointegration.](#)

- Dr. Brian Glaister, Empowering Engineering Technologies Corporation: [Developed a prototype physical exotendon device to facilitate walking for individuals with significant mobility impairments.](#)

Prostate Cancer Research Program

- Dr. KM Rahman, Wayne State University: [Discovered that DIM, a purified compound found in certain vegetables, when taken with Taxotere, can greatly reduce prostate cancer cell growth.](#)
- Dr. Marianne Sadar, British Columbia Cancer Agency: [Discovered a compound from marine sponges that has been adapted \(EPI-001\) to significantly slow the growth of prostate cancer tumors that do not respond to standard hormone treatments.](#)
- Dr. Karen Cichowski, Brigham and Women's Hospital: [Discovered the mechanism by which DAB2IP, a potent and broad tumor suppressor, influences NFκB and EZH2 in prostate cancer metastasis, paving the way for the development of drugs more specifically targeting advanced disease.](#)
- Dr. Lloyd Trotman, Cold Spring Harbor Laboratory: [Identified a new tumor suppressor gene, PHLPP1, which cooperates with another well-known prostate cancer tumor suppressor gene, PTEN, to prevent progression to aggressive prostate cancer.](#)

Spinal Cord Injury Research Program

- Dr. Gregory Dekaban, University of Western Ontario: [Developing humanized, anti-inflammatory antibody as a novel, neuroprotective treatment to improve outcomes after spinal cord injury.](#)
- Dr. Maiken Nedergaard, University of Rochester: [Developing a small molecule P2X7R antagonist as a treatment for acute Spinal Cord Injury.](#)

Tuberous Sclerosis Complex Research Program

- Dr. Mary Koenig, University of Texas Health Science Center at Houston: [Evaluating Rapamycin as a potential therapeutic for cutaneous manifestations of Tuberous Sclerosis Complex.](#)